

Part 3: Design Criteria

Design criteria include standards and guidelines. Standards and guidelines (S&Gs) set mandatory limits and constraints on management activities.

A **Standard** is a mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

A **Guideline** is a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the intent of the guideline is met. Guidelines are established to help achieve a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Together with applicable law, regulation, and policy, these Design Criteria provide sideboards for subsequent projects and activities to help achieve the desired conditions and objectives.

A wide variety of sources of information inform project and activity decision-making. This information is in the form of laws, regulations, policy, memoranda of understanding, conservation strategies, and programmatic agreements. Existing laws, regulations, and Forest Service directives are not repeated in this chapter. These documents are available from Forest Service offices, and most are posted on the internet. Many are cross-referenced in the design criteria under Other Sources of Information, but these lists are not all-inclusive.

3.1 Ecological Sustainability

Physical Resources Standards and Guidelines

Air Quality

- SG1.** Design all Forest management activities to prevent violations of applicable air quality standards. Implement prescribed fire such that air quality standards are not exceeded. [Guideline]
- SG2.** Control fugitive dust as needed during ground disturbing activities and periods of intensive road use. [Guideline]

Water Quality

- SG3.** Design all Forest management activities to prevent violations of applicable water quality standards. [Guideline]
- SG4.** Apply current version of the PSW Region Best Management Practices and Forest Service National Core BMPs to all management activities. Require temporary erosion control measures prior to commencing any soil disturbing activities. [Guideline]

- SG5.** Avoid discharging solid and liquid wastes on or in the soil or water, with the exception of vegetative debris from forest management practices, clean earth and rock disposed of in approved locations, and wastes for which special waivers have been granted by state water quality protection agencies. [Guideline]
- SG6.** For waters designated as “Water Quality Limited” (Clean Water Act Section 303(d)), participate in the development of Total Maximum Daily Loads (TMDLs) and TMDL Implementation Plans. Execute applicable elements of completed TMDL Implementation Plans. [Guideline]
- SG7.** Store fuel and other toxic materials only at designated sites. Prohibit storage of fuel and other toxic materials within SEZs except at designated administrative sites and sites covered by a Special Use Authorization. Refuel outside of SEZs unless there are no other alternatives. [Guideline]

Water Use and Development

- SG8.** Cloud seeding to increase precipitation may be permitted unless this activity is shown to produce permanent substantial changes in land use or significant adverse environmental effects. [Guideline]
- SG9.** The water needed for beneficial uses of existing water rights, and availability of other water sources to supply the needs of forest ecosystem resources must be considered in reviewing water-extraction applications and evaluations, as well as requests for utilizing existing USFS water rights as part of special use permits. [Guideline]

Soil Quality

- SG10.** Avoid soil displacement to the extent practical when grading slopes, piling brush or slash, or engaging in other heavy equipment operations where earth moving is not the objective. [Guideline]
- SG11.** During vegetation management activities, limit operation of wheeled or tracked vehicles and timber harvesting equipment to designated routes, and restrict operations to periods of suitable soil moisture conditions as defined in project planning documents and contracts. Suitable conditions also include frozen ground, and/or a firm, protective base of compacted snow. When suitable conditions are not present, restrict equipment use to roads and designated stream crossings unless suitable mitigation measures can be employed. [Guideline]
- SG12.** Avoid unstable areas and SEZs when reconstructing existing roads and landings or constructing new roads and landings. Minimize and mitigate impacts where avoidance is not practical. [Guideline]
- SG13.** For vegetation management activities, detrimental disturbance that results in permanent soil impairment (defined in FSM 2550.5) should generally be limited to 15% of the activity area, or unit. The permanent transportation system is excluded from this calculation. [Guideline]

Stream Environment Zones

- SG14.** Apply appropriate BMPs and project design to reduce, as much as possible, (1) the risk of activity-related sediment entering aquatic systems, and (2) impacts to habitat for aquatic- or riparian-dependent plant and animal species. [Guideline]
- SG15.** Prescribe project-specific buffers around water bodies and SEZs, including meadows, bogs, fens, springs, and other wetlands as needed to maintain water quality and the physical and biological integrity of SEZs. [Guideline]
- SG16.** Prohibit disturbance of vegetation and soil in the unstable area of the shorezone, except as necessary for public safety or to provide for uses that by their nature require location within the shorezone. (The unstable area of the shorezone is where littoral and/or wave action processes have their greatest influence. The area may vary considerably in width) . [Guideline]
- SG17.** Avoid or mitigate activities that adversely affect the water flow, water quality, or water temperature critical to sustaining groundwater-dependent ecosystems. [Guideline]
- SG18.** Permit tree removal and fuel treatments within SEZs when the activity is consistent with desired conditions. Utilize low ground-pressure vehicles, helicopters, over the snow logging, or other minimum ground-disturbing methods when operating off roads. Limit construction of new skid trails or roads for access into SEZs for fuel treatments or tree removal to the minimum needed. [Guideline]

Natural Hazards

- SG19.** Prohibit new development in areas at risk from identified natural hazards including but not limited to mass wasting and avalanches. [Guideline]
- SG20.** Ensure that design, construction or rehabilitation of Forest Service real property is in accordance with standards and criteria outlined in the National Flood Insurance Program (42 U.S.C. 4001 and following) using flood-proofing measures and structural elevation where practicable. [Guideline]

Physical Resources Other Sources of Information:

Air Quality

- ☐ El Dorado, Placer, and Washoe County regulations; NDEP regulations
- ☐ California Regional Haze Plan, CalEPA State Implementation Plan (Jan. 22, 2009)

Water Quality

- ☐ Water Quality Management for Forest System Lands in California, Best Management Practices
- ☐ National Best Management Practices for Water Quality Management on National Forest System Lands
- ☐ FSH 2509.22 – Region 5 Soil and Water Conservation Handbook, Chapter 20, Cumulative Watershed Effects
- ☐ Water Quality Control Plan for the Lahontan Region, Chapter 5
- ☐ Lake Tahoe Basin 208 Plan

- ❑ Clean Water Act

Water Use and Development

- ❑ FSM 2540 – Water Uses and Development: FSM 2541.4, FSM 2541.41, and FSM 2541.42
- ❑ EA for Low Water Management 5/3/81; Minimum Flow needs for Taylor Creek 6/81; Hydrologic Analysis and Operating Plan for Fallen Leaf Lake 6/81
- ❑ Memorandum of Understanding with the Fallen Leaf Protection Association, 3/6/72

Soil Quality

- ❑ FSM 2500 Ch.2550 Soil Management
- ❑ 2509.22 – Region 5 Soil and Water Conservation Handbook, Chapter 50 – Erosion Hazard Rating

Stream Environment Zones

- ❑ See Water Quality and Soil Quality information sources.

Natural Hazards

- ❑ Region 5 Water Quality Management Handbook
- ❑ Natural Hazard Study for the Lake Tahoe Basin Management Unit

Forest Vegetation, Fuels, and Fire Management Standards and Guidelines

- SG21.** Apply an EPA registered borax compound to cut stumps in recreation and other high value sites according to Regional policy and recommended guidelines to limit the likelihood of heterobasidion root disease; outside of these areas determine the need to apply borax, based on biological considerations and management and restoration objectives. [Guideline]
- SG22.** Provide up to a 100 foot radius of defensible space around all structures on all USFS structures or USFS permitted structures as well as for non-federal structures adjacent to National Forest System lands. [Guideline]
- SG23.** In conifer forest types, design fuel reduction treatments so that post treatment fuels conditions will not sustain crown fire. [Guideline]
- SG24.** Evaluate the need for ecosystem restoration following large disturbance events (wildfire, drought, insects and disease infestation, windstorm, or other unforeseen events). Give priority to public safety first and then to wildlife habitat, soils, vegetation and water quality. Consider reduction in forest fuels to meet fuel loading and fire behavior guidelines. Consider sale of timber and biomass to offset the cost of restoration and to meet restoration goals. [Guideline]
- SG25.** When designing forest health or fuels reduction treatments within a high use area or developed site consider, in coordination with recreation and special-uses staff, additional treatment measures as needed to address area- or site-specific objectives. [Guideline]

- SG26.** When fuels are piled adjacent to trails or in high use areas or sites, ensure that project design includes proximity, pile size, and timing of burn to protect recreation and scenic resources. [Guideline]
- SG27.** Allow unplanned ignitions on NFS lands in all fire management units (FMUs) to meet forest plan desired conditions and objectives, when safety issues have been resolved and smoke impacts can be minimized. [Guideline]
- SG28.** Suppress all unplanned ignitions in the WUI defense zone . [Guideline]
- SG29.** After wildfires and other large-scale natural disturbances, take prompt measures to reduce adverse effects on public safety, water quality, scenic quality, recreation use, wildlife, and forest health. [Guideline]
- SG30.** Apply minimum impact suppression tactics (MIST) during fire management actions in wilderness and roadless areas. [Guideline]
- SG31.** In general, operate ground-based mechanized equipment for vegetation treatment on slopes less than or equal to 30%. Exceptions should be consistent with safety and design specifications and with the ability to effectively alleviate significant resource impacts. [Guideline]
- SG32.** Openings created for forest structure may be no more than 10 acres in size for Jeffrey pine, white fir-mixed conifer, and red fir types. The edges of openings should be shaped and blended to the extent practicable with the natural terrain. [Standard]
- SG33.** Retain trees 30 inches dbh and larger unless one or more of the following conditions apply: [Guideline]
- a) The tree(s) larger than 30 inches dbh presents a safety hazard.
 - b) The tree(s) larger than 30 inches dbh is a host/source of insects, disease, or pathogens
 - c) Shade tolerant trees larger than 30 inches dbh are increasing the rate of mortality or out-competing preferred species
 - d) Changes in SEZ conditions (e.g. lowering of the local water table) have allowed conifer encroachment to persist long enough to develop trees larger than 30 inches dbh
 - e) Aspen restoration requires the removal of trees that have grown larger than 30 inches dbh since the initiation of wildland fire suppression policies in the early 20th century.
 - f) When creating early seral openings to accomplish vegetation desired conditions
 - g) When managing for blister rust resistant sugar pines that require removal of competing trees within a sufficient radius to improve health of the sugar pine.
- SG34.** Leave burn piles of slash from vegetation treatments no closer than 25 feet from water bodies and intermittent or perennial stream channels. [Standard]

Forest Vegetation, Fuels, and Fire Management Other Sources of Information:

- ❑ Forest Health Protection Handbook Chapter 60: Management of Specific Pests Amendment No.: 3409-11-2010-1. Regional Foresters' letter regarding policy to follow CA law 4291.
- ❑ LTBMU Resource Guidelines for Wildfire Suppression
- ❑ LTBMU Fire Management Plan
- ❑ FSM 5100

Biological Resources Standards and Guidelines

Conservation of Species and Habitat

- SG34.** Use Region 5 Stream Condition Inventory (SCI) or other Forest Service-accepted habitat assessment protocol to assess aquatic habitat. [Guideline]
- SG35.** Maintain downstream flow and volume adequate to support aquatic species during in-stream restoration and water drafting activities. Avoid construction of artificial impoundments for water use except where needed for initial suppression of wildfires. Ensure that any artificial impoundments are removed after use and the area is restored back to natural conditions. [Guideline]
- SG36.** Ensure that field gear (waders, float tubes, etc.) is cleaned, decontaminated, and/or fully dried prior to entering or moving between aquatic habitats. Decontaminate field clothing and gear prior to entering and when moving between cave habitats to prevent the spread of pathogens and disease. [Guideline]
- SG37.** When stream crossings are constructed, reconstructed, or permanently removed, provide for aquatic organism passages. [Guideline]
- SG38.** Conduct fish salvage prior to in-stream management activities. Consult with resource specialists regarding the approach and procedures. [Guideline]
- SG39.** Employ measures such as LOPs, buffering, and flagging and avoiding to minimize negative impacts or risk of negative impacts to known TE, FP (federal proposed), FC, FSS, populations and habitats where feasible and as directed by law. [Guideline]
- SG40.** On a project specific basis, prescribe measures needed to provide for the diversity of plant and animal communities and support the persistence of native species. [Guideline]
- SG41.** Where compatible with other resource objectives for the area, increase total Salix (willow) cover during project implementation where habitat conditions will support Salix communities. Willows planted within the project area should be planted in patches with a mean size of 375 m². [Guideline]
- SG42.** Design pesticide applications to avoid negative effects on TE, FC, FSS species and their habitats. [Guideline]
- SG43.** Snags and coarse woody debris would be retained at developed recreation, administrative and permitted sites after considerations have been made for defensible space, public health and safety, and other management objectives for the site. [Guideline]

- SG44.** Manage stream reaches on the Forest to attain levels of stream shading which maintain cold water conditions from the months of June–September when precipitation and base flows are normally lowest and ambient air temperatures are highest. Cold water conditions during June – September should target a maximum 7-day mean temperature of 20°C or less. [Standard]
- SG45.** Provide a renewable supply of large downed logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the SEZs. Leave existing downed trees and CWD that are in perennial or intermittent stream channels in place unless removal is needed to maintain channel stability, as determined by a Forest Service watershed specialist or fish biologist. [Standard]
- SG46.** To avoid removing or altering bank stabilizing vegetation, trees may be marked for removal (live or dead) within 5 feet of the bank edge of perennial or intermittent streams and lakes, as approved by a Forest Service watershed specialist or fisheries biologist, only where fuel loads or stand densities exceed desired conditions and where CWD is at or above desired levels or where trees are a hazard to safe operations. [Standard]
- SG47.** Use screening devices for water drafting pumps. (Fire suppression activities are exempt during initial attack.) Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats. [Standard]
- SG48.** In restoration projects following disturbance events greater than 1000 acres outside of the WUI, retain medium and large snags in at least 10 percent of the area. For wildfires, retain 10% of the high- and mid-severity patches. Prescribe snag retention after providing for public safety, to meet ecological restoration objectives. Include site-specific considerations such as snag spatial arrangement and density, wider range of snag sizes and densities, and focal placement of snags and snag patches. [Standard]
- SG49.** During project-specific analysis determine appropriate amount of coarse woody debris to provide for long-term habitat quality. Coarse woody debris is generally comprised of at least three downed logs per acre in varying stages of decay. [Standard]
- SG50.** Manage snag levels during project specific analysis after consideration for public safety. Provide for a sustainable population of medium- and large-diameter snags or live trees that exhibit form and/or decay characteristics regarded as important wildlife habitat (e.g., have substantial wood defect, teakettle branches, broken tops, large cavities in the bole, etc.). Retain snags as follows: [Guideline]
- Red fir forest type and white fir-mixed conifer forest types – on average six of the largest snags per acre (In the WUI, fewer snags may be retained; snags shall be strategically located.)
 - Jeffrey pine – on average three of the largest snags per acre (In the WUI, fewer snags may be retained; snags shall be strategically located.)
 - Snags should be clumped and distributed irregularly across treatment units.
 - Snags with cavities are a priority for primary and secondary cavity nesters (e.g., mountain bluebirds, house wrens, and white breasted nuthatch). When snags are absent consider installation of nest boxes to benefit cavity nesters.

- e. Coordinate among resource specialists to determine appropriate retention levels based on availability and project objectives.

SG51. Do not construct roads and trails within ¼ mile of the top or base of known cliff nesting raptor sites. Within ¼ mile of occupied nest sites or habitat, prohibit activities such as rock climbing that may disrupt breeding during the raptor nesting season (April 1-July 31). [Standard]

SG52. Prevent disturbance to streambanks and natural lake and pond shorelines caused by resource activities (for example, livestock, off-highway vehicles, and dispersed recreation) from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots. This standard does not apply to developed recreation sites; sites authorized under Special Use Permits and designated off-highway vehicle routes. [Standard]

Invasive Species Management (Aquatic and Terrestrial)

SG53. Incorporate prevention and control measures into project planning and management activities to prevent new introductions or contribute to spreading of invasive species, and reduce impacts from existing infestations. [Guideline]

SG54. Implement prevention measures to decrease the potential for aquatic invasive species transference during wildfire suppression operations. [Guideline]

SG55. During wildland fire operations install weed washing stations at wildland fire staging areas, base camps, or other incident locations, to clean soil, seeds, vegetative material, or other debris that could contain or hold seeds of invasive plants from off-road equipment and vehicles to minimize the risk of spreading or introducing invasive species. Contact the Forest Noxious Weed Coordinator regarding procurement of a weed washing station. [Guideline]

SG56. Use only invasive-free mulches (e.g., straw and hay), seed, and organic matter. Local native seed sources for revegetation should be used. Topsoil from project areas should be salvaged where feasible. [Guideline]

SG57. Gravel, fill, and other materials used in project activities should be free of invasive species. On-site materials should be used where possible. [Guideline]

SG58. Avoid locating landings or staging areas within areas infested by invasive species. If no other options exist, treat invasives prior to use. [Guideline]

SG59. Utilize portable wash stations or other techniques on motorized/mechanized equipment at active project sites associated with a high risk of noxious weed spread to reduce the risk of future introductions and help to contain the spread of existing infestations, through the life of the Forest Plan. [Guideline]

SG60. Encourage use of certified weed free hay and straw. Cooperate with other agencies and the public in developing a certification program for weed free hay and straw. Phase in the program as certified weed free hay and straw becomes available. This guideline applies to pack and saddle stock used by the public, livestock permittees, outfitter guide permittees, and

local, State, and Federal agencies. [Guideline]

Protected Activity Centers and Home Range Core Areas (PACs and HRCAs)

- SG61.** Delineate Northern goshawk PACs surrounding all known occupied, or occupied within the last ten years, and newly discovered breeding territories detected on National Forest System lands. Designate Northern goshawk PACs based upon the location of territorial adult birds or recently fledged juvenile goshawks during the fledgling dependency period. [Standard]
- SG62.** Delineate California spotted owl PACs surrounding each territorial owl activity center detected on NFS lands. Designate Owl activity centers for all territorial owls based on (1) the most recent documented nest site, (2) the most recent known roost site when a nest location remains unknown, and (3) a central point based on repeated daytime detections when neither nest or roost locations are known. Designate a minimum of 300 contiguous habitat acres in spotted owl PACs. [Standard]
- SG63.** Establish a California spotted owl home HRCA surrounding each territorial spotted owl activity center. The acreage in the PAC counts toward the HRCA. Delineate HRCAs within 1.5 miles of the activity center. [Standard]
- SG64.** Maintain PACs and HRCAs regardless of California spotted owl or northern goshawk occupancy status. However, after a stand-replacing event, evaluate habitat conditions within a 1.5 mile radius around the activity center to identify opportunities for re-mapping the PAC. If a California spotted owl PAC is remapped, the corresponding HRCA should be remapped within 1.5 miles of the remapped spotted owl PAC. If there is insufficient suitable habitat for designating a PAC within the 1.5 mile radius, the PAC and corresponding HRCA may be removed from the network. [Standard]
- SG65.** PACs should only be re-mapped for vegetation projects (e.g. forest health or fuels reduction) when project activities would result in the loss of suitable nesting habitat within the PAC and the project location cannot be altered to avoid intersecting with the PAC. The re-mapped PACs should contain habitat of equal quality, include known nest sites and important roost sites, and be of equivalent value to the species. [Guideline]
- SG66.** Vegetation treatments in PACs should maintain suitable habitat structure and function following implementation. [Guideline]
- SG67.** Mechanical treatments may be conducted to meet fuel objectives in PACs located in WUI Defense Zone. In PACs located in WUI threat zone, mechanical treatments are permitted where prescribed fire is not feasible and where avoiding PACs would significantly compromise the overall effectiveness of the landscape of fire and fuels strategies. [Guideline]
- SG68.** When conducting vegetation treatments in HRCAs, maintain suitable foraging habitat structure and function following implementation where possible. HRCAs should only be re-mapped or removed to address stand replacing events or to include associated, remapped PACs. Re-mapped HRCAs should contain habitat of equal quality and equivalent value to the species. HRCAs can only be removed if no suitable habitat exists for remapping.

- SG69.** Where canopy cover in PACs and HRCAs exceeds desired conditions, maintain current cover unless reduction would improve habitat conditions to meet life history needs of the species. [Guideline]
- SG70.** Use the following resource prioritization gradient for vegetation treatments: fire and fuels objectives increase in priority with increasing proximity to communities while wildlife objectives increase in priority with increasing distance from communities and proximity to specific wildlife resources (e.g., nest and/or roost sites). [Guideline]
- SG71.** Allow vegetation treatments in PACs under the following circumstances only: [Standard]
- a) For the purposes of PAC restoration when the following conditions apply:
 - i. Surveys for the target species conducted to meet Region 5 protocol demonstrate that reproduction has not occurred within the PAC in at least the previous three years;
 - ii. The PAC is not currently occupied; and either
 - a.Desired conditions within the PAC are not being met and conducting treatments would achieve the desired conditions or shorten the time until those conditions would be expected to occur; or
 - b.Desired conditions are currently met but vegetation treatments are required to maintain desired conditions over the next 15 years.
 - b) To address wildland fire risk within the Wildland Urban Interface (WUI):
 - i. In the Defense Zone, where an unacceptable risk to communities is demonstrated at the stand level (e.g., when wildland fire behavior models predict crown fires); or
 - ii. In the Threat Zone, where the overall landscape level fire and fuels strategy would be ineffective.
 - c) To reduce threats (e.g. pathogens, insects, disease and/or wildfire) to the persistence of forested stands in or adjacent to PACs.

Species Refuge Areas

- SG72.** Management actions are consistent with habitat and population recovery objectives outlined in the LCT short-term recovery action plan for the Lake Tahoe Basin. [Guideline]
- SG73.** Management actions are consistent with habitat and population objectives outlined in the Sierra Nevada (mountain) Yellow-legged Frog (SNYLF) Conservation Strategy or any future developed recovery Plan. [Guideline]
- SG74.** Manage individual populations of TYC on National Forest Lands consistent with the species' conservation strategy. [Guideline]
- SG75.** Take actions as needed to minimize the risk of spreading Bd fungus and other potential aquatic pathogens and/or diseases through aquatic systems. [Guideline]
- SG76.** Decontaminate aquatic field sampling and survey gear (e.g., gill nets, electroshocker probes, float tubes, and waders) when moving between water bodies to avoid transmission of Bd fungus and other potential aquatic pathogens and/or diseases. [Guideline]

SG77. In streams or lakes occupied by SNYLF, limit disturbance on or near streambanks and lakeshores during breeding activities or where egg masses are present. [Standard]

SG78. In streams occupied by LCT, limit activity disturbance on or near stream banks and in floodplains until after June 15 to ensure completion of spawning and egg incubation periods. [Standard]

Biological Resources Other Sources of Information:

- ☐ Forest Service Manual and Handbook (FSM/H 2670)
- ☐ Endangered Species Act (ESA), Section 7 and implementing regulations (CFR)
- ☐ Species-specific Recovery Plans that establish population goals for recovery of those species
- ☐ Species management plans
- ☐ Species management guides or conservation strategies
- ☐ Regional Forester policy and management direction
- ☐ Pacific Southwest Region Noxious Weed Management Strategy. 2001.
- ☐ Forest Service Manual (FSM) 2900.
- ☐ Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 et. seq.)
- ☐ 36 C.F. R. 222.8.
- ☐ Departmental Regulation 9500-10.
- ☐ Noxious Weed Executive Order 13112.
- ☐ Lake Tahoe Basin Weed Coordinating Group Memorandum of Understanding (2008).
- ☐ Additional laws, regulation and policy as found in FSM 2901 (2011)

3.2 Social and Economic Sustainability

Recreation Standards and Guidelines

Recreation Opportunity

SG79. During implementation of projects with the potential to affect recreation activities, implement measures to minimize impacts to recreation opportunities, facilities, and visitor safety. Such measures could include limited use or temporary closures. [Guideline]

SG80. Design projects consistent with the ROS classification. [Standard]

Public Access

SG81. Programs are universally accessible to persons with disabilities. [Guideline]

SG82. Permit outdoor recreation facilities in SEZ and on other low capability lands only where they are a part of long range development plans, or where the nature of the activity must be so sited, and where mitigated. [Standard]

Recreation Other Sources of Information:

- ❑ FSH 1900-3 Social Analysis for Planning and Decision-Making
- ❑ The Limits of Acceptable Change (LAC) System for Wilderness Planning, General Technical Report INT-176
- ❑ National Visitor Use Monitoring (NVUM) Reports
- ❑ LTBMU forest orders restricting recreation uses
- ❑ Recreation Facility Assessment, LTBMU
- ❑ Architectural Barriers Act, Forest Service Outdoor Recreation Accessibility Guide
- ❑ Americans with Disabilities Act
- ❑ FSM/FSH 2300 chapters
- ❑ An Approach to Sustainable Recreation-South Shore Corridor

Recreation Special Uses Standards and Guidelines

SG83. Recreation special use activities are consistent with the ROS classification. [Guideline]

SG84. Evaluate the suitability of recreation residence reconstruction on a case by case basis if destroyed by fire, snow loading, or other causes. [Guideline]

SG85. If cabins in or adjacent to SEZ or other sensitive lands are destroyed, where reconstruction is allowed, special use permits will be modified to address impacts to sensitive resources, or revoked if impacts cannot be mitigated . [Guideline]

SG86. On roads and trails serving both special use sites and general public use, share maintenance costs on a basis proportionate to use; establish provisions in the permit. Develop maintenance agreements with individual permittees or associations. [Guideline]

SG87. Trails that are developed and used primarily by special use permittees are required to be maintained to Forest Service standards by the permittees. [Guideline]

SG88. Do not permit new recreation residences including those upon unoccupied lots within existing recreation residence tracts. [Standard]

SG89. Permits for recreation residences within 100-year flood plain, avalanche path, unstable areas or other hazardous situation require a clause stating that substantial damage caused by the hazard will cause the permit to be revoked, and not be re-issued. No additions to existing improvements will be authorized for residences under such circumstances. [Standard]

SG90. Recreation residences will not be allowed to expand in size to handle larger numbers of people or allowed additional impervious surface coverage. The exception is where the Forest Service or other regulatory agencies require additions to the residence for such improvements as toilet facilities. If the required addition cannot be accommodated within the existing land coverage, additional coverage may be authorized.

Recreation Special Uses Other Sources of Information:

- ☐ Desk guides for Concession and Outfitter Guides
- ☐ FSM 2700 and Special Uses Handbooks.
- ☐ Recreation Facility Assessment, LTBMU
- ☐ Architectural Barriers Act, Forest Service Outdoor Recreation Accessibility Guide
- ☐ Americans with Disabilities Act

Interpretive Services and Visitor Services Standards and Guidelines

SG91. Implement a plan for the Tallac Historic Site to preserve the historically significant aspects of the nationally registered historic site while providing for public use and education. [Guideline]

Interpretive Services and Visitor Services Other Sources of Information:

- ☐ USDA FS Interpretive Services Strategy 2003
- ☐ PSW Region 5 Interpretive Services Strategy
- ☐ FSM 2390 Interpretive Services
- ☐ FSH 1600
- ☐ A Federal Vision for the Environmental Improvement Program at Lake Tahoe, June 2006
- ☐ Explore Tahoe Interagency Agreement
- ☐ Meyers Visitor Center Interagency Agreement
- ☐ Plan for the Tallac Historic Site 1994

Conservation Education Other Sources of Information:

- ☐ EIP
- ☐ FSM 1623 Natural Resource and Environmental Education

- ❑ The USDA Forest Service Interpretive Services Strategy
- ❑ Strategic Plan for Conservation Education in the Pacific Southwest Region, FSM 1623

Scenic Resources Standards and Guidelines

Scenery management emphasizes careful adherence to standards and guidelines so that the high scenic integrity of NFS Lands is sustainable over time. Scenic resource and built environment guidelines are incorporated into management activities and into the design and development of agency facilities.

SG92. All resource management and permitted activities shall meet or exceed the established scenery objectives shown on the Minimum Scenic Integrity (MSI) map. [Standard]

Scenic Resources Other Sources of Information:

- ❑ USDA Forest Service, Lake Tahoe Basin Management Unit, Scenery Management System Inventory, 2008.
- ❑ Lake Tahoe Basin Scenic Resource Inventory, Wagstaff and Brady, 1980
- ❑ USDA Forest Service, Publication FS-710, The Built Environment Image Guide for the National Forests and Grasslands, December 2001.
- ❑ Agriculture Handbook No. 701, 1995. Landscape Aesthetics, A Handbook for Scenery Management
- ❑ USDA Forest Service, Sign Plan
- ❑ Best Environmental Design Practices - The following information constitute the Landscape Management Best Environmental Design Practices for utilities, range, roads, timber, fire, ski areas, and recreation activities:
 - U.S. Department of Agriculture, Forest Service. National Forest Landscape Management:
 - Volume 1. Agriculture Handbook 434. Washington, DC: U.S. Department of Agriculture; 1973.
 - U.S. Department of Agriculture, Forest Service. National Forest Landscape Management:
 - Volume 2, Chapter 2: "Utilities." Agriculture Handbook 478. 1975.
 - Volume 2, Chapter 3: "Range." Agriculture Handbook 484. 1977.
 - Volume 2, Chapter 4: "Roads." Agriculture Handbook 483. 1977.
 - Volume 2, Chapter 5: "Timber." Agriculture Handbook 559. 1980.
 - Volume 2, Chapter 6: "Fire." Agriculture Handbook 608. 1985.
 - Volume 2, Chapter 7: "Ski Areas." Agriculture Handbook 617. 1984.
 - Volume 2, Chapter 8: "Recreation." Agriculture Handbook 666, 1987

Cultural Resources Standards and Guidelines

SG93. When avoidance of adverse impacts is not possible, authorize impacts to significant properties only after negotiating and signing a Memorandum of Agreement between the Forest Service and/or the appropriate State Historic Preservation Officer and Advisory Council on Historic Preservation. [Guideline]

SG94. Collect cultural artifacts only for diagnostic dating purposes, answering research questions, or protection of the artifact. [Guideline]

SG95. Except as noted in the foregoing guideline, record cultural artifacts in detail in the field, and leave them in place. [Guideline]

SG96. Include historic property protection provisions in contracts and special use permits as applicable. [Guideline]

SG97. Prohibit the use of metal detectors to locate archaeological or historical artifacts except for scientific research as permitted by the Forest Service. [Guideline]

Cultural Resources Other Sources of Information:

- ☐ American Antiquities Act of June 8, 1906
- ☐ Historic Sites Act of 1935 as amended (16USC 461-467)
- ☐ Protection of Archaeological Resources (36 CFR 296)
- ☐ Curation of Federally-Owned and Administered Archeological Collections (36 CFR 79)
- ☐ Protection of Historic Properties (36 CFR 800)
- ☐ Region 5 Amended Regional Programmatic agreement with the USFS and SHPO for Compliance with Section 106 of the National Historic Preservation Act.

Tribal Relations Standards and Guidelines

SG98. Consult with the Washoe Tribe of Nevada and California when management activities may affect tribal rights and interests or impact culturally important resources, consistent with the Consultation Protocol. [Guideline]

Tribal Relations Other Sources of Information:

- ☐ American Indian Religious Freedom Act of 1978 as amended (42 USC 1996 and 1996a)
- ☐ EO 13084-Consultation with Indian Tribal Governments
- ☐ EO 13175-Consultation with Indian Tribal Governments
- ☐ Cooperative Agreement, February 26, 1999, establishing collaborative wetlands conservation planning for the Baldwin/Taylor Creek and Meeks Meadow areas
- ☐ Record of Decision for Cave Rock Management Direction Final Environmental Impact Statement, USDA Forest Service, Lake Tahoe Basin Management Unit, August 5, 2003, Cave Rock Closure Forest Order No. 19-08-01.
- ☐ Native American Graves Protection and Repatriation Act (NAGPRA).

Noise Standards and Guidelines

SG99. The LTBMU policy is consistent with the TRPA (Tahoe Regional Planning Agency) Noise Thresholds for the Tahoe Basin for the National Forest lands within the Basin. [Standard]

Access and Travel Management Standards and Guidelines

SG100. Manage motorized vehicle use as designated and illustrated on the motorized vehicle use map. [Standard]

Roads

SG101. Temporary roads, or access ways created as part of public or commercial management activities, shall be restored to prevent vehicle travel as soon as practical and/or upon completion of the use. Restoration shall include stabilization measures and other BMPs to protect water quality. [Guideline]

SG102. To protect watershed resources, employ the following guidelines for all road work (construction, reconstruction, and relocation):

- a) Design new stream crossings and replacement stream crossings to pass at least the 100-year flood, including bedload and debris
- b) Design stream crossings to maintain streamflow in the channel in the event of failure of a road crossing
- c) Where feasible, design stream crossings to maintain natural hydrologic flow paths, including avoiding diversion of streamflow and interception of surface and subsurface water
- d) When locating or reconstructing roads, avoid SEZs or minimize effects to natural flow patterns in SEZs
- e) Avoid road construction in meadows.
- f) Where potential slope instability is identified for road projects, develop site-specific mitigation measures.
- g) Conduct road construction, reconstruction, and maintenance using appropriate best management practices to minimize sediment delivery to streams and other water bodies. Road drainage shall be routed away from potentially unstable channels, fills, and hill slopes. Design BMPs to minimize reoccurring maintenance needs for both economic savings and resource protection. [Guideline]

SG103. Implement seasonal road restrictions when:

- a) Weather or seasonal conditions result in vehicles causing unacceptable damage to soil and water resources,
 - b) Damage incurs costs that are too great to justify repairing the road structure,
 - c) User safety may be jeopardized by the road condition or other hazards,
 - d) There may be significant conflicts with wildlife or potential habitat degradation.
- [Guideline]

SG104. Install barriers and/or signs to prevent roadside parking wherever necessary to protect the public and natural resources. [Guideline]

SG105. Avoid road building in areas of high mass soil instability, and design to protect water quality and scenic value in areas of moderate stability. [Standard]

Trails

SG106. Manage trails as directed in the Forest Service Trails Management Handbook.
[Guideline]

SG107. Design new trails to avoid SEZs or minimize effects to natural flow patterns in SEZs.
[Guideline]

Over-Snow Vehicles

SG108. Manage motorized over-the-snow vehicle use as designated. [Standard]

Access and Travel Management Other Sources of Information:

Roads

- ☐ FSM 7700
- ☐ LTBMU Forest Transportation Atlas
- ☐ 36 CFR 261 Travel Management Rule
- ☐ Travel Management Directives FSM 7700
- ☐ LTBMU Motor Vehicle Use Map
- ☐ Forest Orders

Trails

- ☐ FSM 2350 Trails
- ☐ FSH 2309.18 Trail Management Handbook
- ☐ Tahoe Rim Trail Management Plan
- ☐ Pacific Crest National Scenic Trail Comprehensive Plan
- ☐ LTBMU Motor Vehicle Use Map
- ☐ EM 7720-103 Standard Specification for the Maintenance and Construction of Trails

Over-Snow Vehicles

- ☐ Snowmobile Guide, LTBMU

Built Environment Standards and Guidelines

SG109. Design the architectural character of administrative and recreation buildings, landscape structures, site furnishings, wayside structures and signs installed or operated by the Forest Service, its cooperators or permittees to be consistent with the Built Environment Image Guide, North Pacific Province (BEIG FS710). Structures should be visually subordinate to, and complement the surrounding landscape. Utilize a “Tahoe architectural theme” that is intended to blend facilities with the natural environment, meet user expectations, and maintain recreation niche consistency. [Guideline]

SG110. Design sites and facilities to conform to the designated Recreation Opportunity Spectrum Class. [Guideline]

SG111. Require use of plant species native to the area or species approved for local use when revegetating disturbed sites and landscaping. [Guideline]

SG112. Install only the minimum amount of permanent lighting needed at administrative and recreation buildings, landscape structures, and signs installed or operated by the by the Forest Service or its cooperators and permittees to protect the dark night sky while not increasing safety risks. Utilize light-sensitive, motion activated lighting systems that are illuminated only when needed for security and/or for maintenance. Utilize hooded light fixtures to prevent horizontal and upward light pollution. [Guideline]

SG113. Retrofit existing facilities to meet universal accessibility standards. [Guideline]

SG114. Ensure that facilities comply with health and safety codes. [Guideline]

Built Environment - Other Sources of Information:

- ☐ March 2004 LTBMU Facilities Master Plan
- ☐ Architectural Barriers Act, Forest Service Outdoor Recreation Accessibility Guidelines
- ☐ 2005 Energy Policy Act and Executive Order 13123
- ☐ FSM/FSH 2330 and 7300
- ☐ USDA Forest Service, Publication FS-710, The Built Environment Image Guide for the National Forests and Grasslands, December 2001.
- ☐ USDA Forest Service, Sign Plan
- ☐ Home Landscaping Guide for Lake Tahoe and Vicinity, UNR Cooperative Extension

Lands Standards and Guidelines

SG115. Land boundary lines should be surveyed, posted, and marked according to these priorities: 1) lines needed to meet planned activities; 2) lines need to protect USFS lands from encroachment; and 3) all other land boundary lines. [Guideline]

SG116. For planning purposes, acquired properties shall be included in the management area in which they are located. If a larger property is located in more than one management area, it will be included in both management areas as defined by the extension of the existing area boundaries. [Guideline]

Lands - Other Sources of Information:

- ☐ Landownership Adjustments (36 CFR 254); Land Uses (36 CFR 251)
- ☐ FSM 5400 Landownership
- ☐ FSM 5500 Landownership Title Management
- ☐ FSH 5409 Landownership Handbooks
- ☐ FSH 5509 Landownership Title Management Handbooks
- ☐ Federal Highway Administration, in accordance with the Forest Service MOU with the FHA.

Non-Recreation Special Uses Standards and Guidelines

Utility Easements

- SG117.** Utilize or expand existing utility easements and rights of way to maximize capacity, before granting additional easements. [Guideline]
- SG118.** Locate utility easements and rights of way where easily accessible for utility repair or modification. Minimize and mitigate disturbance to the natural and scenic environment. Site overhead transmission line alignments to meet scenic integrity objectives for minimizing visual impact. [Guideline]

Communication Sites

- SG119.** New cellular phone sites shall be co-located with existing infrastructure whenever feasible, such as water storage facilities, or existing communication sites. [Guideline]

Rights-of-Way

- SG120.** Grant road access to private land only where no other reasonable alternative exists, and where access is compatible with the road design and maintenance standards necessary for resource protection and public safety. [Guideline]
- SG121.** Access roads for operations and maintenance shall be managed under permit for non-system roads and under road use agreements for system roads to ensure adequate maintenance and BMPs to prevent resource damage to National Forest System lands. [Guideline]

Research and Monitoring Projects

- SG122.** All research and monitoring projects must be authorized by the LTBMU forest supervisor. Research and monitoring projects shall be evaluated and monitored by the appropriate LTBMU resource-program staff to determine whether NFS land is needed, if the projects meet legitimate research needs, and to ensure protection of natural resources and facilities during use. [Guideline]
- SG123.** Require special use permits for research and monitoring projects when they require installation of facilities or potential impacts to soil, vegetation, cultural, or other resources. [Guideline]

Non-Recreation Special Uses Other Sources of Information:

- ☐ FSM 1920 Land and Resource Management Planning;
- ☐ FSM 2700 Special Uses Management;
- ☐ FSH 2709.11 Special Uses Management Handbook

Minerals Standards and Guidelines

SG124. Locatable mineral operations shall be required to ensure protection of resources and facilities. Approval of mineral operations shall be based on site-specific evaluation.

[Guideline]

SG125. Plans of operation, reclamation plans, and reclamation bonds shall address the costs of

- a) Removing facilities, equipment, and materials
- b) Isolating and neutralizing or removing toxic or potentially toxic materials
- c) Salvaging and replacing topsoil and
- d) Revegetating to meet the objectives of the land allocation in which the operation is located.

[Guideline]

SG126. Extraction of common variety minerals shall not be approved. [Standard]

Minerals - Other Sources of Information:

- ❑ FSM 2800 Minerals and Geology

3.3 Designated Special Areas Standards and Guidelines

Desolation, Granite Chief, and Mt. Rose Wilderness

SG127. Manage wilderness areas in compliance with specific wilderness management plans or minimum stewardship components identified through the ten-year Wilderness Stewardship Challenge. [Guideline]

SG128. Consider wildland fire management strategies on a case-by-case basis as articulated in the Wilderness management plan or fire management plan. [Guideline]

National Trail System

Pacific Crest Trail, National Scenic Trail

Overall responsibility for the management of the Pacific Crest National Scenic Trail (PCT) lies with the Pacific Southwest Regional Forester.

SG129. Maintain a ½ mile (1/4 mile from centerline) scenic corridor for the Pacific Crest National Scenic Trail both inside and outside of wilderness areas. [Guideline]

SG130. Mechanized use of the PCT is prohibited via Regional Order 88-4. [Standard]

SG131. Motorized use of the PCT is prohibited via 36 CFR 261.20. [Standard]

Tahoe Rim Trail, Pope-Baldwin Bicycle Trail, Hawley Grade

SG132. Maintain a scenic corridor of 300' for the National Trail System within the Lake Tahoe Basin Management Unit. [Guideline]

Designated Special Areas Other Sources of Information:

Desolation, Granite Chief, and Mt. Rose Wilderness

- ☐ 1964 National Wilderness Preservation Act
- ☐ Desolation Wilderness Management Plan
- ☐ Granite Chief Wilderness – Tahoe National Forest wilderness management guidelines
- ☐ Mt Rose Wilderness – Humboldt Toiyabe National Forest wilderness management guidelines
- ☐ Regional Minimum Impact Decision Guide for Wilderness

Tallac Historic Site, Special Interest Area

- ☐ Tallac Historic Site Master Plan (FEIS Record of Decision, USDA Forest Service, El Dorado County, CA, July 14, 1994).

Grass Lake Research Natural Area

- ☐ Forest Service Manual 4000, Ch. 4063 – Research Facilities and Areas

- ❑ Regional Forest Order

Lake Tahoe East Shore Drive, National Scenic Byway

- ❑ East Shore Drive National Scenic Byway, Rural Section, Incline Village to US 50, Corridor Management Plan, prepared by EDAW, Inc., for Carson City and Nevada Department of Transportation, TRPA, TEAM Tahoe, August 1997.
- ❑ Scenic Byways, A Design Guide for Roadside Improvements. Prepared for U.S. Department of Transportation Federal Highway Administration, prepared by the USDA Forest Service San Dimas Technology and Development Center, July 2002.
- ❑ Landscape and Aesthetics Corridor Plan for US 395, West US 50, SR 28, SR 207 and SR 421, prepared by Design Workshop and others for the Nevada Department of Transportation, December 15, 2006.

Pacific Crest Trail

- ❑ Pacific Crest National Scenic Trail Comprehensive Plan, Approved: July 15, 2006. USDA Forest Service, Washington Office. National Recreation Trails
- ❑ Regional Order 88-4

Tahoe Rim Trail, Pope-Baldwin Bicycle Trail, Hawley Grade

- ❑ The Tahoe Rim Trail Management Plan, February 26, 2010. USDA Forest Service, LTBMU
- ❑ Forest Service Manual 2309.18 Chapter 10 Trail Planning, Oct. 16, 2008.
- ❑ National Trails System Act 1968
- ❑ Regional Order 88-4

3.4 Management Area Standards and Guidelines

Santini-Burton Acquired Lands/Urban Forest Parcels

- SG133.** Identify and post (flag and/or sign) all land boundaries prior to project work to avoid conflicts with adjacent private properties. [Guideline]
- SG134.** Manage coarse woody debris and snag retention to meet forest productivity and wildlife needs while meeting defensible space standards. [Guideline]
- SG135.** Allow adjoining property owners to conduct fuels reduction activities annually on portions of Urban Forest Parcels that are located within 100 feet of a structure; to a level that allows compliance with California State Law PRC 4291 while providing resource protection to NFS lands. [Guideline]
- SG136.** Apply an EPA registered borax to cut stumps according to Regional policies and guidelines in order to prevent establishment or spread of Heterobasidion root disease. [Guideline]
- SG137.** Improvements shall not be placed on Santini-Burton acquired lands, other than for dispersed recreation, erosion control projects or permitted activities. [Standard]
- SG138.** Recreational activities such as overnight camping, off highway vehicle use, over snow vehicle use, and development of user created trails for hiking and mountain biking are prohibited on urban forest parcels. [Standard]

Management Area Other Sources of Information:

- ☐ PL 96-586 – Santini-Burton Act
- ☐ R5 FSM Supplement 5100-2010-1, referencing Defensible Space Letter from Regional Forester, 12/2009
- ☐ California State Law PRC 4291
- ☐ Report to Congress, Urban Intermix Parcel Acquisition and Management in the Lake Tahoe Basin, January 14, 2004)